J. SIMMONS.
Car-Coupling.

No. 208,934. Patented Oct. 15, 1878.

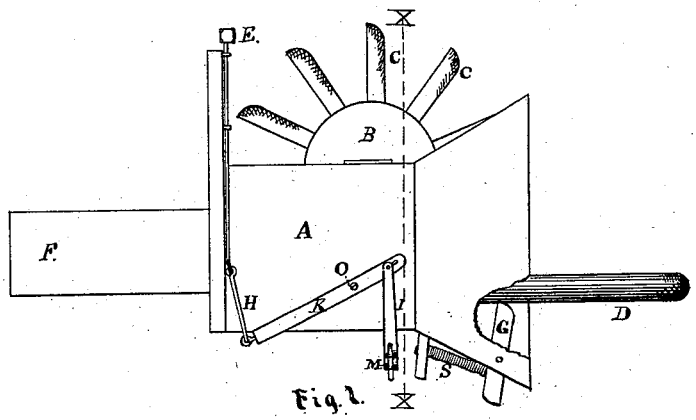

Fig. 1.

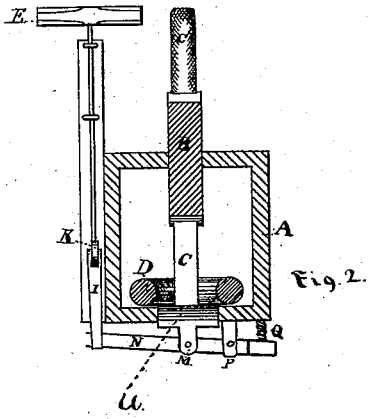

Fig. 2.

Witnesses
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JOSEPH SIMMONS, OF COOPERSVILLE, MICHIGAN.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **208,934**, dated October 15, 1878; application filed October 2, 1877.

To all whom it may concern:

Be it known that I, JOSEPH SIMMONS, of the village of Coopersville, county of Ottawa, and State of Michigan, have invented certain new and useful Improvements in Automatic Car-Couplers, which improvements are fully set forth in the following specification and accompanying drawing, in which—

Figure 1 is a side view of a draw-bar and bumper with the automatic car-coupler attached, and Fig. 2 is a sectional view of the bumper through the line *x x*, with my coupler attached, showing a portion of the coupling-link in the position which it occupies when coupled.

The object of my invention is to furnish a device by which the cars using the ordinary coupling-link may be coupled automatically as the cars are brought in contact with each other, and so arranged that the cars can be uncoupled at the side or top of the car with equal facility, whether the cars are stationary or in full motion.

In the drawings, A A represent the bumper, which is made flaring, the more readily to direct the coupling-link to the point where it engages with the coupling-pin. F is the draw-bar. B is the wheel, journaled in or at the upper side of the draw-head, and provided with a series of short pins, *c c*, arranged like the spokes of a wheel, which act as coupling-pins.

The pins *c c* are straight on one side, and on the other are rounded, as shown in the figure, so that when they are pressed upon the front side of spring-latch *u* they will drive it downward and pass over the spring-latch. *u* is a latch which is attached by a short bar, M, to the lever N. Q is a spiral spring, which, when *u* is thrown down, brings it back to the coupling position shown in Fig. 2. The lever N turns on the fulcrum P. I is a bar or rod connecting lever N with lever K. K turns on fulcrum O, and is connected by means of a hinged rod to the hand-piece E, as shown. The spring Q is of sufficient power to raise the spring-latch *u* to the coupling position.

The operation of my invention is as follows: The cars being brought together, the end of the link D is brought in contact with one of the coupling-pins *c*, which is driven back over latch *u* to such a distance that another of the pins passes into the link and beyond latch *u*, when the cars are coupled. The latch *u* is a slide, and rests against the solid part of the draw-head, so as to give the coupling the greatest amount of strength and durability. By lifting on the hand-piece E the front end of the lever K is pressed downward, and also the left end of lever N, as shown in Fig. 2, lowering spring-latch *u*, releasing the coupling-pin, and uncoupling the cars.

The pins *c c* may be made very short, and thus combine great strength with little weight, and the power obtained by the use of the levers K and N acting on the latch *u*, which need be moved but a very small distance to release the pin *c*, enables the operator to uncouple the cars when in full motion, and even when the pin is receiving the greatest strain, with facility.

The device shown is designed to be used from the top of the car, or from the platform, but may readily be adapted to be used at the side of the car, if desired.

G is a lip, held in the position shown in Fig. 1 by the spring S. It is designed to hold up the link in the coupling position, and is so arranged that if at any time the coupling-link strikes it when the cars are being coupled it turns backward on the lower inner surface of the draw-head, and allows the coupling-link to engage with the coupling-pin.

By using the draw-head in the form above described high and low cars can readily be coupled as well as those of equal heights.

Having thus described my invention, what I claim to have invented, and desire to secure by Letters Patent, is—

A draw-head having the wheel B, provided with coupling-pins, spring-latch *u*, lip G, lever K, bar I, and lever N, all constructed substantially as described.

JOSEPH SIMMONS.

Witnesses:
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